



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

DEC 1 1994

Site: MONARCH TILE  
Break: 10.11  
Other: Y.3

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TRANSMITTAL OF FINAL AGREEMENT AND NOTIFICATION  
OF EFFECTIVE DATE OF AGREEMENT

Monarch Tile Manufacturing, Inc.  
Attn: Thomas S. White, President  
834 Rickwood Road  
Florence, AL 35630

SUBJ: Administrative Order on Consent for  
Engineering Evaluation/Cost Analysis and  
Non-Time Critical Removal Action  
Monarch Tile, Inc.  
Florence, Alabama

Dear Mr. White:

By this letter, EPA hereby transmits the signed final Administrative Order on Consent for an Engineering Evaluation and Cost Analysis to be performed by Monarch Tile, Inc. for the Site located on Rickwood Road in Florence, Alabama. Pursuant to Section XXVII, paragraph 123, the effective date of this agreement is the date of your receipt of this notice.

As provided in Section XVIII, your company will receive a bill for the payment of response and oversight costs at the end of fiscal year 1995, which ends September 30, 1995. Monarch Tile, Inc. must remit a certified or cashiers check for the full amount of these costs within forty-five (45) calendar days of the company's receipt of each accounting for response and oversight costs.

If you have any questions regarding the implementation of this agreement, please contact Timothy R. Woolheater, Remedial Project Manager, (404)347-2643, extension 6248, or David M. Moore, Assistant Regional Counsel, (404)347-2641, extension 2248.

Sincerely,

*Joseph R. Franzmathes*  
Joseph R. Franzmathes  
Director  
Waste Management Division

Enclosure



10581187

cc: Helen Curry Foster, Esq.  
Christopher Johson, ADEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF:

Monarch Tile,  
Inc.

Respondent.

ADMINISTRATIVE ORDER ON  
CONSENT FOR NON-TIME CRITICAL  
REMOVAL ACTION

Proceeding Under Sections 104,  
106(a), 107 and 122 of the  
Comprehensive Environmental  
Response, Compensation, and  
Liability Act, as amended, 42  
U.S.C. §§ 9604, 9606(a), 9607  
and 9622

EPA DOCKET NO.: 95-7-C

ADMINISTRATIVE ORDER ON CONSENT  
FOR NON-TIME CRITICAL REMOVAL ACTION

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ADMINISTRATIVE ORDER ON  
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ADMINISTRATIVE ORDER ON CONSENT  
FOR NON-TIME CRITICAL REMOVAL ACTION

I. INTRODUCTION

This Administrative Order on Consent ("Consent Order") is entered into voluntarily by the United States Environmental Protection Agency ("EPA" or "United States") and Monarch Tile, Inc. ("Respondent"). This Consent Order provides for the performance of the removal action by Respondent and the reimbursement of response costs incurred by the United States in connection with the property located at 834 Rickwood Road in Florence, Alabama, 35630 ("Site").

II. JURISDICTION AND GENERAL PROVISIONS

1. This Consent Order is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607, and 9622, as amended ("CERCLA"), and delegated to the Administrator of EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the EPA Regional Administrators by EPA Delegation Nos. 14-14-A, 14-14-C, and 14-14-D, and redelegated to the Director, Waste Management Division.

2. EPA has notified the State of Alabama of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

3. Respondent's participation in this Consent Order shall not constitute or be construed as an admission of liability or of EPA's Findings of Facts, Conclusions of Law, or Determinations contained in this Consent Order except as to jurisdiction or in a proceeding to enforce the terms of this Consent Order. Respondent agrees to comply with and be bound by the terms of this Consent Order and to undertake and implement all work required by the terms and conditions of this Consent Order. Respondent further agrees that, solely for the purposes of and in any proceeding to enforce the terms of the Consent Order, it will not contest the basis or validity of this Consent Order or its terms, including EPA's authority or jurisdiction to issue or to enforce this Consent Order.

4. The parties recognize that this Consent Order has been negotiated by the parties in good faith and implementation of this Consent Order will expedite the response actions and avoid prolonged and complicated litigation between the parties.

### III. DEFINITIONS

5. Unless otherwise expressly provided herein, terms used in this Consent Order incorporate the definitions set forth in Section 101 of CERCLA, 42 U.S.C. § 9601, and in the regulations comprising the National Contingency Plan, 40 C.F.R. 300.5, and in EPA's policies and guidances. Terms used in the plural in this Consent Order shall have the same meaning as the singular equivalent. Whenever terms listed below are used in this Consent Order or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

"ADEM" shall mean the Alabama Department of Environmental Management and any successor departments or agencies of the State.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

"Consent Order" or "Order" shall mean this Administrative Order on Consent, and all appendices attached hereto (listed in Section XXX). In the event of conflict between this Consent Order and any appendix or attachment, this Consent Order shall control.

"CWA" shall mean the Clean Water Act, also known as the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 et seq.

"Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Consent Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

"EE/CA" shall mean the engineering evaluation and cost analysis to be performed by Respondent pursuant to this Consent Order, and in accordance with EPA's "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA" (OSWER Dir. #9360.0-32, August 1993).

"EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"Effective Date" shall mean the date upon which Respondent receives written notice of the signature of this Consent Order by the authorized representative(s) of the EPA, as set forth in Part XXV.

"Facility" shall have the same meaning as set forth in Section 101 of CERCLA, 42 U.S.C. § 9601, and in the regulations comprising the National Contingency Plan, 40 C.F.R. 300.5, and in EPA's policies and guidances.

"National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including, but not limited to, any amendments thereto.

"North Fill Area" shall mean (1) Lots 7 and 8 in Block 2 of the Sandlin Industrial Park, according to the plat thereof recorded in the office of the Judge of Probate of Lauderdale County, Alabama, in Plat Book 4, Page 149 (Attachment 5 to this Consent Order provides a graphic depiction of this portion (1) of the North Fill Area); and (2) A tract or parcel of land lying and being in the Southwest 1/4 of Section 35, Township 2 South, Range 11 West, Lauderdale County, Alabama, more particularly described as follows: To reach the point of beginning, commence at the Southeast corner of the Southwest 1/4 of the said Section 35; thence South 87 degrees 52 minutes West for a distance of 406.57 feet; thence North 2 degrees 00 minutes West for a distance of 699.71 feet; thence South 88 degrees 00 minutes West for a distance of 97.0 feet to a point on the West right-of-way line of Helton Drive, said point also being the point of beginning; thence continue South 88 degrees 00 minutes for a distance of 718.6 feet to an existing iron pin on the East right-of-way line of the L&N Railroad; thence Northwestwardly along a curve to the left along said right-of-way of said railroad, having a chord



bearing of North 27 degrees 50 minutes West for a distance of 266.64 feet to and existing concrete monument (disturbed); thence North 88 degrees 00 minutes East for a distance of 431.70 feet to an existing concrete monument; thence South 2 degrees 00 minutes East for a distance of 25.0 feet; thence North 88 degrees 00 minutes for a distance of 366.30 feet to a point on the West right-of-way line of Helton Drive; thence around a curve to the right and along the West line of Helton Drive, chord bearing South 11 degrees 42 minutes East for a distance of 218.10 feet to the point of beginning and containing 3.957 acres, more or less (Attachment 6 to this Consent Order provides a graphic depiction of this portion (2) of the North Fill Area).

"Paragraph" shall mean a portion of this Consent Order identified by an arabic numeral or an upper case letter.

"Parties" shall mean the United States and the Respondent.

"Response Costs" shall mean all costs recoverable pursuant to CERCLA as provided in Section 107(a), including, but not limited to, direct and indirect costs and interest, that the United States, its employees, agents, contractors, consultants, and other authorized representatives incurred and paid with regard to the Site, including but not limited to verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Order, and including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, and the costs incurred pursuant to Section XII of this Consent Order (including, but not limited to, attorneys fees and the amount of just compensation).

"RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 et seq. (also known as the Resource Conservation and Recovery Act).

"Site" shall mean the Site operated by Monarch Tile, Inc., and located at 834 Rickwood Road in Florence, Lauderdale County, Alabama, 35630. The Site consists of two lots directly across Rickwood Road from each other. The north lot ("Parcel No.1") contains 9.30 acres; the south lot ("Parcel No.2") consists of 17.50 acres. Parcel No.1 is on Lauderdale County tax map #41-24-01-02-2; Parcel No.2 is on Lauderdale County tax map #41-15-07-35-3. The parties agree that should the official name of the Site be changed by Federal Register notice issued subsequent to the effective date of this Agreement, any name designated by such subsequent Federal Register notice shall be deemed to be the name of the Site for the purposes of this Agreement.

"State" shall mean the State of Alabama.

"Scope of Work" or "SOW" shall mean the statement of work for implementation of the EE/CA and/or removal action that is the

subject of this Consent Order, as set forth in Attachment 1 to this Consent Order and any modifications made in accordance with this Consent Order.

"United States" shall mean the United States of America.

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); and (2) any pollutant or contaminant under Section 101(33), 42 U.S.C. § 9601(33).

"Work" shall mean all activities Respondent shall perform under this Consent Order.

#### IV. PARTIES BOUND

6. This Consent Order shall apply to and be binding upon the United States and the Respondent and Respondent's agents, successors, assigns, officers, directors, and principals. The signatories to this Consent Order certify that they are authorized to execute and legally bind the parties they represent to this Consent Order. No change in the ownership or corporate status of the Respondent shall alter its responsibilities under this Consent Order.

7. Respondent shall provide a copy of this Consent Order to the current owner of the Site, the Industrial Development Board of the City of Florence within fourteen (14) days of the Effective Date of this Consent Order. If Respondent is notified of a pending change in ownership before ownership rights are transferred, Respondent shall provide a copy of this Consent Order to any subsequent owners, operators, or successors who obtain ownership rights during any time during which Respondent is operating at the Site, and to the first subsequent owner, operator or successor following the time after which Respondent ceases to operate at the Site. If Respondent obtains ownership rights in the Site, Respondent shall provide a copy of this Consent Order to the subsequent owner, operator or successor before ownership rights are transferred. Respondent shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Consent Order, within fourteen (14) days after the Effective Date of this Consent Order or the date of retaining their services, whichever is later. Respondent shall condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Consent Order and for ensuring that its subsidiaries, employees, contractors, consultants, subcontractors and agents comply with this Consent Order.

## V. STATEMENT OF PURPOSE

8. This Consent Order requires Respondent to conduct an engineering evaluation and cost analysis ("EE/CA") and the response actions described herein to remove and/or abate, mitigate and/or eliminate conditions which may present an imminent and substantial endangerment to the public health, welfare or the environment because of an actual or threatened release of hazardous substances, pollutants or contaminants that have been released into the environment at or from the Site. More specifically, Respondent agrees hereunder to conduct the engineering evaluation and cost analysis ("EE/CA") and the removal response activities described herein. Respondent undertakes investigation of the North Fill Area in an effort to expedite investigation of such removal response activities.

9. In entering into this Consent Order, the mutual objectives of the United States and Respondent are:

A. With respect to the engineering evaluation ("EE"), to determine fully the nature and extent of the threat if any to the public health or welfare or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site into the environment, and to establish a continuous process during the implementation of this Consent Order for the assessment of site-specific conditions and the need for action.

B. With respect to the cost analysis ("CA"), to develop and evaluate alternatives for non-time critical removal action to prevent, mitigate or otherwise respond to the migration or the release or threatened release of hazardous substances, pollutants, or contaminants from the Site and evaluate and compare the cost of each alternative; and to achieve prompt risk reduction through early actions.

C. To provide for the removal, treatment, disposal and/or on-site management of contaminated materials from all contaminated areas, based on the results of the EE/CA, necessary to protect public health, welfare and the environment.

D. To provide for the recovery of response and oversight costs incurred by the United States with respect to this Consent Order.

E. To conduct the activities required by this Consent Order in a manner consistent with the NCP and subject to the express EPA approvals as set forth below.

## VI. EPA's FINDING OF FACTS

For the purposes of this Consent Order, EPA makes the following findings of fact:

10. The Site is currently an operating tile manufacturing facility operated by Respondent, Monarch Tile, Inc. The Site, located in Florence, Alabama, consists of two lots directly across Rickwood Road from each other, at the intersection of Helton Drive. It is approximately 3 miles north of Pickwick Lake, which is part of the Tennessee River surface water system, and approximately 2 miles east of Cypress Creek, a tributary of the Tennessee River. The north lot ("Parcel No.1") contains 9.30 acres; the south lot ("Parcel No.2") consists of 17.50 acres. Parcel No.1 is on Lauderdale County tax map #41-24-01-02-2; Parcel No.2 is on Lauderdale County tax map #41-15-07-35-3.

11. Respondent is the current operator and was an operator at the time of disposal of hazardous substances of the tile manufacturing facility at the Site from which hazardous substances, pollutants and/or contaminants have been released. The Site was operated as a tile manufacturing facility by Stylon Corporation from 1954 until Stylon Corporation petitioned for bankruptcy in February 1973. Respondent commenced its tile manufacturing operations at the Site in September 1973 and presently manufactures tile at the Site. From 1968 to 1980, Respondent was a publicly held corporation with about 2600 shareholders. Respondent's stock is currently owned 75% by Ceragen S.A. and 25% by Lecico S.A.

12. Respondent was the owner and/or operator of the Site at the time of disposal of hazardous substances, pollutants, and/or contaminants at the Site. The City of Florence, Alabama, owned Parcel No. 1 from October 15, 1952 until May 26, 1988. The City of Florence owned Parcel No. 2 from June 9, 1955 to May 26, 1988, with the exception that it sold the office and warehouse portion of Parcel No. 2 to the Industrial Development Board of the City of Florence on January 7, 1969. The City of Florence leased the two parcels (with the exception of the portion of Parcel No. 2 owned by the Industrial Development Board of the City of Florence) to Respondent from September 1, 1973 until May of 1988. On May 26, 1988, the City of Florence conveyed Parcel No. 2 (with the exception of the portion of Parcel No. 2 owned by the Industrial Development Board) and Parcel No. 1 to Respondent. Respondent owned both parcels (with the noted exception of a portion of Parcel No. 2), from May 26, 1988 until August 31, 1989. On August 31, 1989, the two parcels were conveyed by Respondent to the Industrial Development Board of the City of Florence. Both parcels are currently owned by the Industrial Development Board of the City of Florence.

13. Respondent's tile manufacturing facility consists of two plants. At the facility, Respondent manufactures ceramic tile which involves the application of glaze material to tile to produce the finished tile product. Glaze material is generally reclaimed and reused. However, waste glaze which can not be reclaimed is delivered to a wastewater treatment system located at the Site, adjacent to Plant No. 2, one of two manufacturing plants. Wastewater containing waste glaze material will hereinafter be referred to as "process wastewater."

14. Respondent's and Stylon Corporation's manufacturing processes at the Site involved the use of materials containing hazardous substances, pollutants, and/or contaminants. Specifically, Stylon and Respondent used glaze compounds containing materials including but not limited to zinc, barium, nickel, chromium and/or lead.

15. Materials contained in the glaze compounds specified in paragraph 14, above, are hazardous substances, pollutants, and/or contaminants.

16. From 1953 to 1960, Stylon Corporation discharged process wastewater from Plant No. 1 through a concrete settler and into a ditch flowing north at the northeast corner of the Site ("North ditch"). Process wastewater was discharged from Plant No. 2 through a wastewater basin which is now closed ("Closed Basin") and into two basins ("Basin No. 1" and "Basin No. 2"). From 1956 to 1960, Basin No. 2 discharged into a ditch flowing south at the southeast corner of the Site ("South ditch").

17. In 1959, the Closed Basin had reached capacity and was taken out of service by Stylon and filled with debris and clay soil. In 1960, process wastewater from both Plant No. 1 and Plant No. 2 was rerouted through a lime flocculation unit and clarifier. Process wastewater was discharged from the clarifier to Basin No. 1, through Basin No. 2, and into the South ditch. Sludge produced by the lime flocculation and clarifier system was placed in the City of Florence Sanitary Landfill.

18. In 1976, Respondent constructed a third basin ("Basin No. 3") to receive discharges from Basin No. 2. Basin No. 3 discharged directly into the City of Florence municipal sewage system, pursuant to a State Indirect Discharge Permit issued by ADEM.

19. In 1979, Respondent ceased using glazes containing lead silicate compounds and barium carbonate in the glazes for manufacturing tile.

20. In 1980, the City of Florence Sanitary Landfill no longer accepted Respondent's flocculation and clarifier system sludge due to its high water content. Respondent constructed a

sludge trench ("Sludge Trench") to dewater and store sludge produced by the flocculation and clarifier system.

21. In 1988, Respondent constructed a rotary drum vacuum filter ("ALAR system") for dewatering the sludge. Dewatered sludge was accepted by the City of Florence Sanitary Landfill.

22. The Closed Basin received process wastewater discharge from Stylon's operations containing hazardous substances, pollutants and/or contaminants from 1953 to 1960. Sampling of the Closed Basin revealed the presence of hazardous substances, pollutants and/or contaminants including, but not limited to, zinc, lead, cadmium, nickel, chromium and barium.

23. Basins Nos. 1 and 2 received process wastewater discharge from 1956 to present. From at least 1956 to 1979, the process wastewater delivered to Basins Nos. 1 and 2 contained glaze materials containing hazardous substances, pollutants and/or contaminants. Hazardous substances, pollutants and/or contaminants were found in Basins Nos. 1 and 2, including but not limited to compounds containing zinc, lead, cadmium, nickel, chromium and barium.

24. Basin No. 3 received process wastewater from 1976 to present. From at least 1976 to 1979, the process wastewater delivered to Basin No. 3 may have contained glaze materials described in paragraph 14, above. Hazardous substances, pollutants and/or contaminants found in Basin No. 3 include but are not limited to zinc, lead, cadmium, nickel, chromium and barium. From 1976 to present, process wastewater received by Basin No. 3 has been routed through Basins Nos. 1 and 2.

25. The Site contains waste piles consisting of scrap fired tile and solid clay wastes.

26. In December 1987, Ecology & Environment, Inc., produced a Site Characterization Report for Respondent. The report documented elevated levels of barium, cadmium, lead, silver and zinc, and low concentrations of arsenic, chromium, copper and nickel in the sludge contained in Basin 1, Basin 2 and the Closed Basin. Groundwater monitoring wells were installed upgradient and down gradient of the waste water basins. Sampling of groundwater monitoring wells installed upgradient and downgradient of the waste water basins indicated that metals concentrations were below drinking water MCLs.

27. On March 3, 1988, Respondent, by and through its attorneys, notified EPA by letter of the presence of heavy metals at the Site, based upon the report by Ecology & Environment, Inc. Respondent expressed a desire to voluntarily perform response activities at the Site with EPA's approval.

28. In August 1989 and October 1990, EPA and ADEM conducted investigations of the contamination at the Site. EPA and ADEM collected soil samples at the Site to determine the extent of contamination. The investigations documented the presence of hazardous substances in soil and sediment samples taken from the Site. Barium, nickel, lead, and zinc were detected in sediment samples collected from settling ponds located on the Site, and zinc, cadmium, lead, nickel, chromium and barium were detected in samples of drainage pathways emanating from the Site. Groundwater monitoring wells were sampled and the analytical results indicated that metals concentrations were below drinking water MCLs.

29. Respondent, and Stylon Corporation, have placed waste glaze material containing hazardous substances, pollutants and/or contaminants on the Site, in settling ponds in the facility's wastewater treatment system. Scrap tile was placed in waste piles located at the Site which may contain hazardous substances, pollutants, and/or contaminants. Additional releases of hazardous substances, pollutants and/or contaminants have occurred at and from the Site by way of surface water drainage pathways.

30. In August of 1991, EPA issued Respondent a notice of potential liability and requested Respondent to conduct or finance response activities at the Site under a Region IV pilot program for expedited cleanup which was subsequently canceled by Region IV. An agreement to conduct response activities was not reached pursuant to that notice letter.

31. Respondent submitted additional information and studies regarding the Site to EPA:

a. In February of 1994, the following documents were submitted:

March 1992 - Assessment of Monarch Tile's Waste Water Basins

February 1993 - Economic Feasibility Report on the Closure of the Waste Water Basins and Sludge Trench

b. Data from the following documents was submitted in August of 1993:

March 1992 - Ditch Characterization

August 1992 - North Ditch Soil Removal Report

c. The following documents were submitted from after February 1994 but before the end of August 1994:

March 1994 - Groundwater Monitoring Well Sampling Report

June 1994 - Background Soils Study Summary

June 1994 - Stormwater Runoff Study

June 1994 - Watershed Dilution Factors for Cox and Sweetwater Creeks

June 1994 - Streamlined Health Risk Assessment/Potential Remedial Goals

July 1994 - Soil Study of Fill Areas

With the exception of the documents listed in b., above, EPA has not reviewed, approved or participated in the development of the above named documents or studies. EPA reviewed the documents listed in b., above, but has not approved of and did not participate in the development of those or any of the above documents. These documents and any underlying work or studies were not authorized, developed, or commented on by EPA. These documents and studies have not been reviewed or analyzed by EPA for technical or scientific adequacy. The inclusion of this list does not constitute an express or implied intent to use or approve of the studies described therein in the implementation of this Consent Order or in activities or Work required by this Consent Order.

32. EPA proposed the Site for listing on the National Priorities List ("NPL") on May 10, 1993 (58 Fed. Reg. 27,507), pursuant to Section 105 of CERCLA, as amended, 42 U.S.C. § 9605. Monarch opposes the proposed NPL listing and has submitted extensive comments thereon to EPA. As of the date of this Consent Order, the Site has not been finalized on the NPL.

33. Hazardous substances, pollutants and/or contaminants at the facility, including but not limited to compounds containing barium, nickel, lead, zinc, cadmium, and chromium, constitute or may constitute a threat to public health, welfare and the environment. Potential exposure to hazardous substances exists via the North and South ditches, which discharge to tributaries of the Tennessee River; water distribution system intakes for the Cities of Florence and Sheffield, Alabama, are located along tributaries to, or on, the Tennessee River, respectively. The Florence Water Department supplies drinking water to an estimated 63,000 people from an intake located where Cox Creek and Cypress Creek meet. The Sheffield Water Department has an intake on the Tennessee River that serves 14,100 people. Cox Creek, Cypress Creek, and the Tennessee River are used for recreational fishing. The NPL listing Hazardous Ranking System report documents drinking water and bioaccumulation threats to human health, welfare and the environment.



## VII. CONCLUSIONS OF LAW

34. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

35. The Respondent is a person as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

36. The Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

37. Materials described in Section VI, above, contain contaminants found at or released from the Site which are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), or constitute pollutants and/or contaminants that may present an imminent and substantial danger to the public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1).

38. The hazardous substances, pollutants and/or contaminants described have been released into the environment and their potential migration pathways constitute an actual release and/or threatened release within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

## VIII. DETERMINATIONS

39. Based on the Findings of Fact and Conclusions of Law set out above, EPA has determined that:

A. The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.

B. The actions required by this Consent Order are necessary to protect the public health and/or welfare and/or the environment.

C. In accordance with Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1), EPA has determined that the Work to be performed pursuant to this Consent Order, if performed according to the terms of this Consent Order, will be done properly and promptly by the Respondent. EPA has also determined that the Respondent is qualified to conduct such work.

## IX. WORK TO BE PERFORMED

40. Unless otherwise specified herein, all activities required under this Section IX Work to be Performed, and all activities required under this Order, apply to all areas of the

Site or Facility, including but not limited to the Site, North and South ditches and the North Fill Area.

41. Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, and the Administrative Record for this Site, it is hereby ORDERED AND AGREED that Respondent shall comply with the following provisions, including but not limited to all attachments to this Consent Order, and all documents incorporated by reference into this Consent Order, and perform the following actions:

42. Designation of Contractor. All activities performed by or on behalf of Respondent pursuant to this Consent Order shall be under the direction and supervision of a qualified professional engineer or other qualified professional with expertise and experience in hazardous waste site clean-up and with specific expertise and experience site characterization, investigation and cleanup. Respondent has notified EPA that ENSR Consulting and Engineering will be using in carrying out the terms of this Consent Order. EPA retains the right to disapprove of any engineer, other professional, contractor or subcontractor retained by the Respondent. If EPA disapproves of a selected engineer, other professional, contractor, or subcontractor, Respondent shall within thirty (30) days of receipt of notice of disapproval retain a different engineer, other professional, contractor or subcontractor and notify EPA of such party's name and qualifications. Respondent shall have the right to change its retained engineer, other professional, contractor or subcontractor. Such a change will be accomplished by notifying EPA in writing at least ten (10) business days before such a change is made.

43. Project Coordinator. Respondent has designated Blair D. Burgess, P.E., as Project Coordinator who shall administer all the Respondent's actions required by this Consent Order. To the greatest extent possible, the Project Coordinator, or his or her designee, shall be present at the Site or readily available during Site work. EPA retains the right to disapprove of any Project Coordinator named by Respondent. If EPA disapproves of a selected Project Coordinator at any time, Respondent shall within fifteen (15) days of receipt of notice of disapproval retain a different Project Coordinator and notify EPA of the new Project Coordinator's name and qualifications.

44. On-Scene Coordinator/Remedial Project Manager. EPA has appointed Timothy R. Woolheater of the EPA, Region IV Waste Management Division, South Superfund Remedial Branch as its On-Scene Coordinator/Remedial Project Manager ("OSC/RPM") who will be EPA's designated representative at the Site. The OSC/RPM shall be responsible for overseeing the implementation of this Consent Order. The EPA designated OSC/RPM shall have the authority vested in an RPM or OSC by the National Contingency

Plan, 40 C.F.R. Part 300, as amended. This includes the authority to halt, conduct, or direct any work required by this Consent Order, or any response actions or portions thereof when he or she determines that conditions may present an immediate risk to public health or welfare or the environment. The absence of the OSC/RPM from the Site shall not be cause for the stoppage or delay of work.

45. Deliverables, including reports, plans or other correspondence to be submitted pursuant to this Consent Order, shall be sent by regular certified mail, express mail or overnight delivery to the following addressees or to such other addressees as the EPA hereafter may designate in writing:

Timothy R. Woolheater  
Remedial Project Manager  
EPA - Region IV  
Waste Management Division  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365

Christopher L. Johnson  
Special Projects  
Alabama Department of Environmental Management  
1890A Cong. W.L. Dickinson Drive  
Montgomery, AL 36130-1463

The number of copies to be submitted to EPA for each deliverable is identified in the attached Scope of Work. Respondent shall submit additional copies of each submission to the OSC/RPM and to additional addressees as directed by the OSC/RPM.

46. Documents to be submitted to Respondent's Project Coordinator should be sent to:

Blair D. Burgess, P.E.  
ENSR Consulting and Engineering  
2809 West Mall Drive  
Florence, Alabama 35630  
(205)767-1210

Helen Currie Foster, Esq.  
Walston, Stabler, Wells, Anderson & Bains  
P.O. Box 830642  
Birmingham, Alabama 35283-0642  
(205)251-9600

47. EPA and Respondent shall have the right, subject to this Section, to change its designated OSC/RPM or Project Coordinator. Each Party shall notify the other within ten (10) business days before such a change is made. The initial notification may be

orally made but it shall be promptly followed by a written notice.

48. EPA shall arrange for oversight and review of the conduct of all activities required by this Consent Order, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). EPA reserves the right to arrange for a qualified person to assist in its oversight and review of the conduct of the activities required by this order. The oversight assistant may observe work and make inquiries in the absence of EPA, but is not authorized to modify the Work Plans. It is the understanding and intent of the parties that EPA to provide ADEM with the opportunity to conduct oversight activities at this Site to the greatest practicable extent. EPA reserves its right to conduct oversight activities which are necessary in its sole and unreviewable discretion.

#### A. PHASE I EE/CA ACTIVITIES

49. All activities required under this Section IX Work to be Performed, A. Phase I EE/CA Activities, shall apply to all areas of the Site or Facility, including but not limited to the Site, North and South ditches and the North Fill Area.

50. EE/CA Work Plan and Implementation. Respondent has submitted to EPA for EPA approval a work plan for a complete Engineering Evaluation and Cost Analysis ("EE/CA Work Plan"). The EE/CA Work Plan shall be prepared in accordance with the SOW, 40 C.F.R. § 300.415(b)(4)(i), EPA's "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA" (OSWER Dir. #9360.0-32, August 1993), and with EPA Region IV Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, U.S. EPA Region IV, Environmental Services Division, February 1, 1991, and subsequent amendments to such guidelines and procedures.

51. The EE/CA Work Plan shall include a comprehensive description of the work to be performed, the methodologies to be utilized, and the rationale for the selection of each methodology. The EE/CA Work Plan shall describe the medias to be investigated (i.e., air, groundwater, surface water, surface and subsurface soils and sediments, etc.). The EE/CA Work Plan shall include a schedule for completion of each major activity required and for the submission of each deliverable required in the conduct of the EE/CA as set forth in the SOW. Such schedule shall reflect submittal of the Engineering Evaluation/Cost Analysis Report within 250 calendar days of the date of EPA approval of the EE/CA Work Plan.

52. Respondent will implement the EE/CA Work Plan in accordance with the schedule contained in the EE/CA Work Plan and as approved by EPA. The EPA approved EE/CA Work Plan, and any

EPA approved amendments thereto, will be attached to and incorporated in this Consent Order as Attachment 2.

53. Within seven (7) calendar days of the approval of the EE/CA Work Plan by EPA, Respondent will commence work on Task 1 of the EE/CA Work Plan.

54. The EE/CA Work Plan required by this order shall be developed and submitted in conjunction with an EE/CA Sampling and Analysis Plan and an EE/CA Health and Safety Plan, although each plan may be delivered under separate cover. These plans shall be developed in accordance with the National Contingency Plan and the attached SOW.

55. EE/CA Sampling and Analysis Plan. The EE/CA Sampling and Analysis Plan ("EE/CA SAP") shall include procedures to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the Data Quality Objectives ("DQOs") established. The EE/CA SAP provides a mechanism for planning field activities and consists of an EE/CA Field Sampling and Analysis Plan ("EE/CA FSAP") and an EE/CA Quality Assurance Project Plan ("EE/CA QAPP").

56. EE/CA Field Sampling and Analysis Plan and EE/CA Quality Assurance Plan. The EE/CA FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sample objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis procedures and methods. The EE/CA QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control ("QA/QC") protocols that shall be used to achieve the desired DQOs.

57. EE/CA Health and Safety Plan. The EE/CA Health and Safety Plan shall be prepared in conformance with the Respondent's health and safety program and OSHA regulations and protocols according to the schedule set forth in the EE/CA Work Plan. Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of EE/CA work under this Consent Order. This plan shall be prepared in accordance with EPA's current Standard Operating Safety Guide, EPA Publication 9285.1-03 (June 1992), and subsequent amendments to such guidelines and procedures. In addition, the plan shall comply with all current applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. Respondent shall incorporate or address to the satisfaction of EPA all changes to the plan recommended by EPA, and implement the plan during the EE/CA removal action.

58. Treatability Studies. Respondent may be required to conduct treatability studies in conducting the EE/CA. Each Treatability Study conducted pursuant to this Consent Order shall be conducted in accordance with EPA Document "Guide to Conducting Treatability Studies Under CERCLA," EPA/540/2-89/058 (or updated edition). Any required performance standards for a Treatability Study shall be established in an EPA-approved Treatability Study Workplan. Respondent shall submit a Treatability Study Workplan to EPA for review and approval in advance of commencing each Treatability Study.

59. Community Relations Plan. Respondent shall present a proposal to EPA for its participation in the community relations plan to be developed by EPA. EPA will determine the appropriate role for Respondent under the Plan. Respondent shall also cooperate with EPA in providing information regarding the Work to the public. Upon request by EPA, Respondent shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

60. Engineering Evaluation/Cost Analysis Report and Selection of Removal Alternative. Within 250 calendar days of EPA's approval of the EE/CA Work Plan, Respondent shall submit an EE/CA Report analyzing removal alternatives to EPA for approval. The EE/CA Report shall analyze removal alternatives (including cleanup and treatment standards for the various alternatives) for the Site. The EE/CA Report shall be prepared in accordance with the SOW and shall include, at a minimum, the following components:

- (a) Site Characterization Summary;
- (b) Identification of Removal Action Objectives (including identification of ARARs and a risk assessment summary);
- (c) Identification and Analysis of Removal Action Alternatives (including analysis of effectiveness, implementability and cost);
- (d) Treatability Study Report for proposed On-Site treatment technologies, as appropriate;
- (e) Comparative Analysis of Removal Action Alternatives; and
- (f) Recommendation of Removal Action Alternative.

61. Public Notice and Public Comment. Upon approval by EPA, the EE/CA Report, together with all supporting documentation, shall be subject to public notice and public comment in accordance with the requirements of Sections 300.415(m)(4) and 300.820(a) of the NCP. At the close of the public comment period, EPA will prepare (1) a Responsiveness Summary responding in writing to significant comments received during the comment period and (2) an Action Memorandum selecting a removal action alternative, including cleanup standards and performance

standards for the proposed treatment technology, for the Site. EPA shall select an appropriate removal action to provide for the removal, treatment and/or disposal of contaminated materials from all impacted areas, based on the results of the final EE/CA Report, necessary to protect public health, welfare and the environment. Upon selection of the appropriate removal action as described in the Action Memorandum, EPA shall issue Respondent a Notice to Proceed with the removal action.

#### B. PHASE II REMOVAL RESPONSE ACTIVITIES

62. All activities required under this Section IX Work to be Performed, B. Phase II Removal Response Activities, shall apply to all areas of the Site or Facility, including but not limited to the Site, North and South ditches, but except the North Fill Area.

63. Removal Action Plan and Implementation. As provided for in the SOW, within thirty (30) calendar days after Respondent's receipt of EPA's selection of a removal action alternative as documented in EPA's Action Memorandum and Notice to Proceed, Respondent shall submit a Removal Action Plan ("RAP") for EPA approval. The RAP shall provide for the performance, and schedule for implementation of, the EPA approved removal action, submission of a Final Report, post removal site control, and such other activities as specified in the SOW or required by this Consent Order. Respondent shall perform the removal response action in accordance with the RAP and all other provisions of this Consent Order.

64. The RAP shall be developed and submitted in conjunction with a Removal Sampling and Analysis Plan and a Removal Health and Safety Plan as provided for in the SOW, although each plan may be delivered under separate cover. These plans shall be developed in accordance with the National Contingency Plan ("NCP") and the attached SOW.

65. Removal Sampling and Analysis Plan. The Removal Sampling and Analysis Plan ("Removal SAP") shall include procedures to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the Data Quality Objectives ("DQOs") established. The Removal SAP provides a mechanism for planning field activities and consists of a Removal Field Sampling and Analysis Plan ("Removal FSAP") and a Removal Quality Assurance Project Plan ("Removal QAPP").

66. Removal Field Sampling and Analysis Plan. The Removal FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sample objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling

and analysis. The Removal QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control ("QA/QC") protocols that shall be used to achieve the desired DQOs.

67. Removal Health and Safety Plan. The Removal Health and Safety Plan shall be prepared in conformance with the Respondent's health and safety program and OSHA regulations and protocols according to the schedule set forth in the RAP. Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during implementation of the removal action selected by EPA under this Consent Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide, EPA Publication 9285.1-03 (June 1992), and subsequent amendments to such guidelines and procedures. In addition, the plan shall comply with all current applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. Respondent shall incorporate or address to the satisfaction of EPA all changes to the plan recommended by EPA, and implement the plan during the removal action.

68. Final Report. Within thirty (30) days after final inspection of the removal response action provided for in Section IX, paragraphs 62-67 of this Order, the Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Order. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports", and with OSWER Directive No. 9360.3-03 - "Removal Response Reporting." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



69. Post-Removal Site Control. In accordance with the SOW, or as otherwise directed by EPA, Respondent shall submit a proposal for post-removal Site control consistent with Section 300.415(k) of the NCP and OSWER Directive #9360.2-02. Upon EPA approval, Respondent shall implement such controls and shall provide EPA with documentation of all post-removal Site control arrangements.

70. Monthly Progress Reports. Respondent shall submit to EPA written monthly progress reports which: (1) describe the actions which have been taken toward achieving compliance with this Consent Order during the previous month; (2) include all results of sampling and tests and all other data received that month by Respondent during the course of the work; (3) include all plans and procedures completed under the EE/CA Work Plan and Removal Action Plan during the previous month; (4) update the monthly report describing all actions, data, and plans to reflect activities scheduled for the next month, and provide other information relating to the progress of the work as deemed necessary by EPA; and (5) include information regarding percentage of completion, unresolved delays, encountered or anticipated, that may affect the future schedule for implementation of the Scope of Work and/or EE/CA Work Plan and Removal Action Plan, and a description of efforts made to mitigate those delays or anticipated delays. These progress reports are to be submitted to EPA by the fifth day of every month following the Effective Date of this Consent Order.

71. During the course of work performed pursuant to this Consent Order, EPA may determine that sampling, analysis, reporting, documentation, reports, excavation, removal or other tasks in addition to those specifically set forth herein are necessary either to satisfy the purposes of this Consent Order or to protect public health, welfare or the environment. If EPA so determines, it will advise Respondent of the nature of the additional tasks, and the basis for EPA's determination. Respondent shall undertake, perform, and complete any such additional work in accordance with the requirements of this Consent Order.

#### **X. SUBMISSIONS REQUIRING AGENCY APPROVAL**

72. EPA reserves the right to comment on, modify and direct changes for all deliverables. Upon receipt of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Order, EPA shall either: (1) approve the submission; or (2) disapprove the submission, notifying Respondent of deficiencies. If such submission is disapproved, EPA shall either: (1) notify the Respondent that EPA will modify the submission to cure the deficiencies; or (2) direct the Respondent to modify the submission to cure the deficiencies. Any disapprovals by EPA shall be in writing and shall include an

explanation by EPA of the basis of disapproval of the plan, report or other item which is required to be submitted for approval.

73. Upon receipt of a notice of disapproval and notification directing modification of the submission, Respondent shall, within twenty-one (21) days, or at other such time as agreed by the parties, cure the deficiencies and resubmit the plan, report, or other item for approval. In the event additional field or laboratory work is required to correct the deficiency in such submission and such field and laboratory work was not provided for in the SOW or a work plan, EPA shall set an appropriate amount of time after communication with Respondent for such submission. Notwithstanding the notice of disapproval, Respondent shall proceed to take any action required by any nondeficient portion of the submission, which is not dependent upon approval of a deficient portion of a submission.

74. In the event of approval or modification of the submittal by EPA, Respondent shall proceed to take any action required by the plan, report, or other item, as approved or modified.

75. If, upon resubmission, the plan, report, or item is not approved by EPA, Respondent shall be deemed to be in violation of this Consent Order and stipulated penalties shall begin to accrue pursuant to Section XVII of this Consent Order, in the manner provided in paragraph 96, below. EPA retains the right to seek stipulated or statutory penalties, to require the amendment of the document, to perform additional studies, to complete the Work pursuant to its authority under CERCLA, and to take any other action, including, but not limited to, enforcement action to recover its costs pursuant to its authority under CERCLA.

76. Neither failure of EPA to expressly approve or disapprove of Respondent's deliverables within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Respondent is responsible for preparing and submitting deliverables acceptable to EPA.

77. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct and completion of the Work. In addition to the discussion of the technical aspects of the Work, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

78. The provisions of this Consent Order shall govern all proceedings regarding the Work conducted pursuant to this Consent Order. In the event of any inconsistency between this Consent Order and any required deliverable submitted by Respondent, the inconsistency will be resolved in favor of this Consent Order.

# **XI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS**

79. Respondent shall use quality assurance, quality control, and chain of custody procedures in accordance with EPA's "Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans" (QAMS-005/80) and the "EPA Region IV Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual," (U.S. EPA Region IV, Environmental Services Division, February 1, 1991), and subsequent amendments to such guidelines and procedures. Prior to the commencement of any monitoring activities under this Consent Order, Respondent shall submit for review, modification and/or approval by EPA, a Quality Assurance Project Plan ("QAPP") that is consistent with applicable guidelines. The QAPP may be incorporated into another document or may be submitted as an independent document. Sampling data generated consistent with the QAPP(s) shall be admissible as evidence, without objection, in any proceeding under Section XV of this Consent Order. Respondent shall assure that EPA personnel or authorized representatives are allowed access to any laboratory utilized by Respondent in implementing this Consent Order.

80. Respondent shall make available to EPA the results of all sampling and/or tests or other data generated by Respondent with respect to the implementation of this Consent Order and shall submit these results in monthly progress reports as described in Section IX, Paragraph 70 of this Consent Order.

81. At the request of EPA, Respondent shall allow split or duplicate samples to be taken by EPA, and/or their authorized representative, of any samples collected by Respondent pursuant to the implementation of this Consent Order. Respondent shall notify EPA not less than fourteen (14) calendar days in advance of any sample collection activity. The OSC/RPM shall have the authority to waive or shorten such notice period upon request. In addition, EPA shall have the right to collect any additional samples that EPA deems necessary. EPA will allow split or duplicate samples to be taken by Respondent if they so desire. EPA will provide Respondent with seven (7) calendar days notice of any sampling activity. EPA shall make available to Respondent a copy of the results of any analysis made of such samples.

82. Respondent shall ensure that the laboratory utilized by Respondent for analyses participates in an EPA quality assurance/quality control program equivalent to that which is followed by EPA and which is consistent with EPA document QAMS-005/80. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program ("CLP") and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory.

83. Notwithstanding any provision of this Consent Order, the EPA hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA, CWA and any other applicable statute or regulation.

## XII. ACCESS

84. From the date of execution of this Consent Order until EPA provides written notice of satisfaction of the terms of the Consent Order, the EPA and its authorized representatives and agents shall have access at all times to the Site and any property to which access is required for the implementation of this Consent Order, to the extent access to the property is controlled by or available to Respondent, for the purposes of conducting any activity authorized by or related to this Consent Order, including but not limited to:

A. Monitoring the Work or any other activities taking place on the property;

B. Verifying any data or information submitted to the United States;

C. Conducting investigations relating to contamination at or near the Site;

D. Obtaining samples;

E. Evaluating the need for or planning and implementing additional removal, remedial or response actions at or near the Site; and

F. Inspecting and copying records, operating logs, contracts, or other documents required to assess Respondent's compliance with this Consent Order.

85. To the extent that the Site or any other area where work is to be performed under this Consent Order is owned or controlled by persons other than Respondent, Respondent shall secure from such persons access for Respondent, as well as for EPA and authorized representatives or agents of EPA, as necessary to effectuate this Consent Order. Copies of such access agreements will be provided to EPA prior to Respondent's initiation of field activities. If access is not obtained within thirty (30) calendar days of the Effective Date of this Consent Order, or within thirty (30) calendar days of the date need for access becomes known to Respondent, Respondent shall promptly notify the EPA. EPA may thereafter assist Respondent in obtaining access. In the event access is not obtained within thirty (30) calendar days of such dates, all dates specified in the SOW for work that is dependent upon access shall be extended one day for each day access is not obtained. Respondent shall,

in accordance with Section XX herein, reimburse the United States for all costs incurred by it in obtaining access, including but not limited to, attorneys' fees and the amount of just compensation and costs incurred by the United States in obtaining access.

86. Notwithstanding any provision of this Consent Order, the EPA retains all of its access authorities and rights under CERCLA, RCRA, CWA, and any other applicable statute or regulations.

#### **XIII. CONFIDENTIALITY OF SUBMISSIONS**

87. Respondent may assert a confidentiality claim, if appropriate, covering part or all of the information requested by this Consent Order pursuant to 40 C.F.R. § 2.203(b). Such an assertion will be adequately substantiated when the assertion is made. Analytical data will not be claimed as confidential by Respondent. Information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to Respondent.

88. Respondent waives any objection to the admissibility into evidence (without waiving any objection as to weight) of the results of any analyses of sampling conducted by or for them at the Site or of other data gathered pursuant to this Consent Order that has been verified by the quality assurance/quality control procedures established pursuant to Section XI.

#### **XIV. RECORD PRESERVATION**

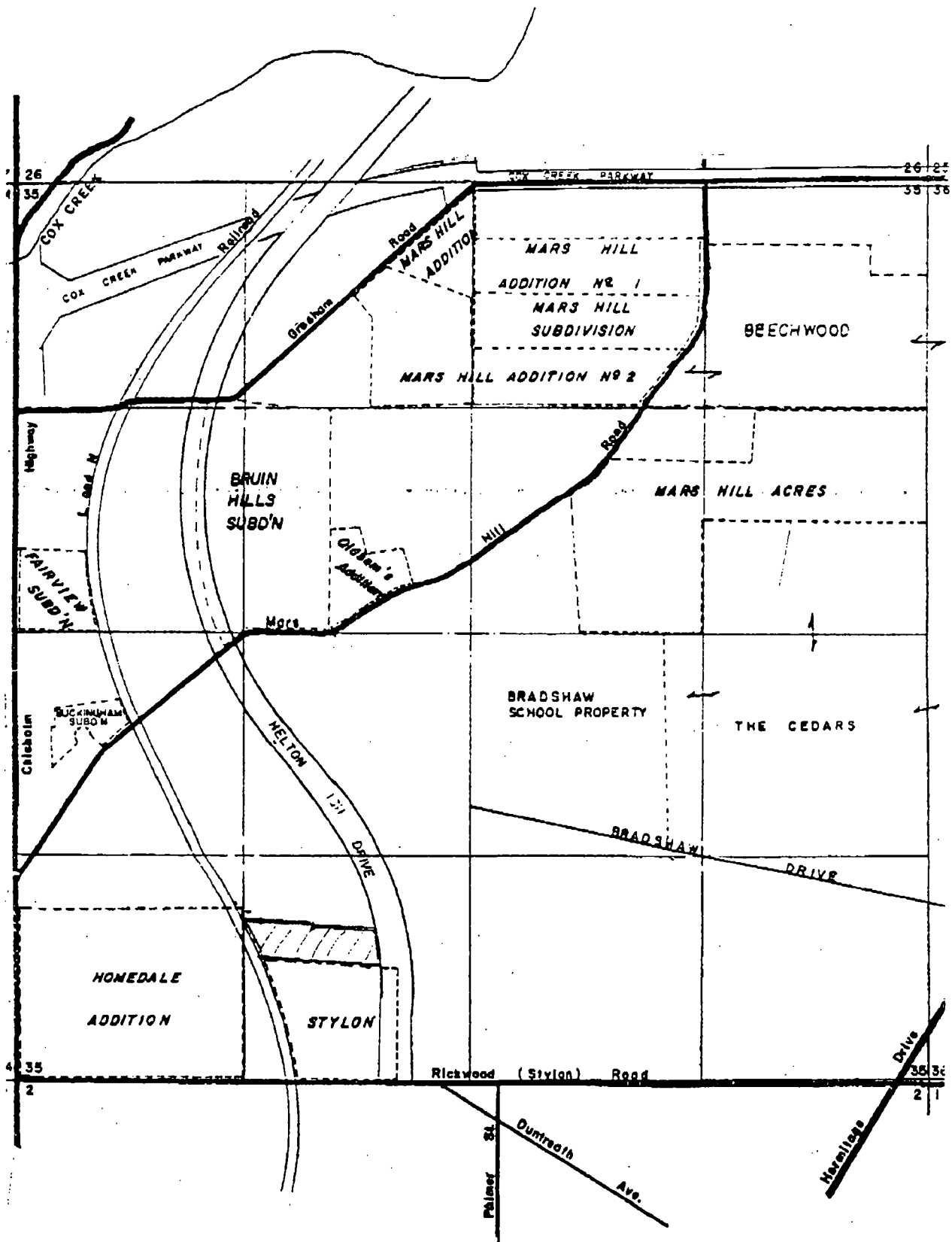
89. EPA and Respondent agree that each will preserve, during the pendency of this Consent Order and for a minimum of six (6) years after its termination, all records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the release of hazardous substances at or from the Site, despite any document retention policy to the contrary. After this six (6) year period, Respondent will notify EPA within ninety (90) calendar days prior to the destruction of any such documents. Upon request by EPA, Respondent will make available to EPA such records or copies of any such records, except records to which a privilege recognized by federal law is asserted. If Respondent asserts such a privilege, counsel for Respondent shall provide EPA with the title, date, and author of the document, record or information, the names and titles of each addressee and recipient, and a description of such document, record, or information, and shall state which privilege(s) are asserted. Additionally, if EPA requests that documents be preserved for a longer period of time, Respondent will comply with that request.

#### **XV. DISPUTE RESOLUTION**

90. Any disputes arising under this Consent Order shall be resolved as follows: The parties shall attempt to resolve expeditiously and informally any disagreements concerning implementation of this Consent Order that are subject to this Section. If the Respondent objects to any EPA notice of disapproval or decision made pursuant to this Consent Order and the parties fail to expeditiously resolve such dispute informally, the Respondent shall notify EPA's Project Coordinator in writing of their objections within fourteen (14) calendar days after receipt of the decision. Respondent's written objections shall define the dispute, state the basis of Respondent's objections, and be sent certified mail, return receipt requested. EPA and the Respondent then have an additional fourteen (14) calendar days to reach agreement through informal negotiations. If agreement cannot be reached within fourteen (14) calendar day period, the EPA Waste Management Division Director ("Division Director") will resolve the dispute consistent with the NCP and the terms of this Consent Order. The Division Director shall provide a written statement of the decision and the reasons supporting that decision to Respondent. The Division Director's determination is EPA's final decision. If Respondent does not agree to perform or does not actually perform the task in dispute as determined by EPA's Division Director, EPA reserves the right to conduct the work itself, to seek reimbursement from the Respondent, and/or to seek other appropriate relief. Respondent is not relieved of its obligations to perform and conduct any other work required by this Consent Order while a matter is pending in dispute resolution. In the event that the Respondent does not prevail on the disputed issue, stipulated penalties shall be assessed and paid at EPA's discretion as provided in Section XVII.

#### **XVI. FORCE MAJEURE**

91. "Force Majeure" is defined for the purposes of this Consent Order as an event arising from causes entirely beyond the control of Respondent and of any entity controlled by Respondent including its contractors and subcontractors, which could not have been overcome by due diligence which delays or prevents the performance of any obligation under this Consent Order. Examples of events which may constitute force majeure events include extraordinary weather events, natural disasters, and national emergencies. Examples of events that are not force majeure events include, but are not limited to, normal inclement weather, increased costs or expenses of the Work to be performed under this Consent Order, the financial difficulty of Respondent to perform such tasks, the failure of one of Respondent to satisfy its obligation under this Consent Order, acts or omissions not otherwise force majeure attributable to Respondent's contractors or representatives, and the failure of



Plat showing the relationship of various Subdivisions to Section 35, Township 2, Range 11 West, Lauderdale County, Alabama.

Respondent or Respondent's contractors or representatives to make complete and timely application for any required approval or permit.

92. When circumstances occur which may delay or prevent the completion of any phase of the Work or access to the Site or to any property on which part of the Work is to be performed, whether or not caused by a force majeure event, Respondent shall notify the EPA Project Coordinator orally of the circumstances within forty-eight (48) hours of when Respondent first knew or should have known that the event might cause delay. If the EPA Project Coordinator is unavailable, Respondent shall notify the designated alternate or the Director of the Waste Management Division, EPA Region IV. Within seven (7) calendar days after Respondent first became aware of such circumstances, Respondent shall supply to EPA in writing: (1) the reasons for the delay; (2) the anticipated duration of the delay; (3) all actions taken or to be taken to prevent or minimize the delay; (4) a schedule for implementation of any measures to be taken to mitigate the effect of the delay; and (5) a statement as to whether, in the opinion of the Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Respondent shall exercise best efforts to avoid or minimize any delay and any effects of a delay. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure.

93. If EPA agrees that a delay is or was caused by a force majeure event, the time for performance of the obligations under this Consent Order that are directly affected by the force majeure event shall be extended by agreement of the parties, pursuant to Section XXVII, for a period at least equal to the actual duration of the delay caused by the force majeure event. An extension of the time for performance of the obligation directly affected by the force majeure event shall not necessarily justify an extension of time for performance of any subsequent obligation.

94. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, or does not agree with Respondent on the length of the extension, the issue shall be subject to the dispute resolution procedures set forth in Section XV of the Consent Order. In any such proceedings, to qualify for a force majeure defense, Respondent shall have the burden of proof that the delay or anticipated delay was or will be caused by a force majeure event, that the duration of the delay was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of Paragraph 92 of this Section. Should Respondent carry this burden, the delay at issue shall be deemed



not to be a violation by Respondent of the affected obligation of the Consent Order.

#### **XVII. STIPULATED PENALTIES**

95. The Respondent shall pay into the Hazardous Substance Superfund administered by EPA, the sums set forth below as stipulated penalties.

96. Unless waived or reduced by EPA in its discretion, stipulated penalties shall accrue as follows:

A. For each day during which Respondent fails to perform, in accordance with the schedules contained in this Consent Order and in the various plans and reports required under this Consent Order incorporated by reference herein, any of the following activities:

(1) for failure to timely submit the EE/CA Work Plan or Removal Action Plan, or components thereof, the EE/CA or Removal Sampling and Analysis Plan, a required Treatability Study Work Plan or Treatability Study, the EE/CA Report, and Final Report as required under this Consent Order;

(2) for failure to timely submit any modifications requested by EPA or its representatives to the EE/CA Work Plan, Removal Action Plan, the EE/CA or Removal Sampling and Analysis Plan, a required Treatability Study Work Plan or Treatability Study, the EE/CA Report, and Final Report as required under this Consent Order; and

(3) for failure to timely submit payment of EPA's Response Costs as provided in Section XVIII, Paragraphs 104-107 of this Consent Order.

Respondent shall be liable to EPA for stipulated penalties in the following amounts:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st through 14th day	\$750
15th through 44th day	\$2,500
45th day and beyond	\$5,000

B. If Respondent fails to submit a monthly progress report by its due date, Respondent shall be liable to EPA for stipulated penalties in the amount of \$500 per violation for each day during which Respondent fails to submit and, if necessary, modify monthly reports.

C. Respondent shall be liable to EPA for stipulated penalties in the amount of \$500 per violation for each day during which Respondent fails to comply with all other requirements of this Consent Order including, but not limited to, any implementation schedule, payment requirement, notification requirement or completion deadline.

97. All stipulated penalties begin to accrue on the day the violation occurs or on the day following Respondent's failure to comply with any schedule or deadline or the terms, conditions, or requirements contained in this Consent Order and/or a work plan. Stipulated penalties shall continue to accrue until Respondent's violation ends or until Respondent complies with the particular schedule or deadline.

98. Payment of stipulated penalties shall be due and owing within fifteen (15) calendar days from the receipt of a written notice from EPA notifying Respondent that penalties have been assessed. Respondent shall submit a certified or cashier's check for the amount of such assessed penalties made payable to the Hazardous Substance Superfund. Interest shall accrue on any unpaid amounts, beginning at the end of the fifteen-day period, at the rate specified in Section 107(a) of CERCLA. Respondent shall pay a handling charge of one percent to be assessed at the end of each thirty-one (31) day period, and a six percent per annum penalty charge, to be assessed if the penalty is not paid in full within ninety (90) days after it is due. The check and transmittal letter shall identify the name of the Site, the Site identification number and the title of this Consent Order. A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

99. Payment shall be made to:

U. S. Environmental Protection Agency  
Region IV  
Superfund Accounting  
P. O. Box 100142  
Atlanta, Georgia 30384  
ATTENTION: Collection Officer for Superfund  
Monarch Tile, Inc.

100. Respondent may dispute EPA's right to the stated amount of penalties by invoking the Dispute Resolution procedures under Section XV of this Consent Order. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondent does not prevail upon resolution, all penalties shall be due to EPA within thirty (30) days of resolution of the dispute, subject to paragraph 90 hereof. If Respondent prevails upon resolution, no penalties shall be paid.

101. In the event that EPA requires that corrections to a document be reflected in a subsequent deliverable and does not require resubmission of such document, stipulated penalties for such document shall not accrue.

102. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Order, provided, however, that a single act or omission shall not be the basis for more than one violation or penalty under this Consent Order.

103. The stipulated penalties set forth in this Section do not preclude EPA from electing to pursue any other remedies or sanctions which may be available to EPA by reason of the Respondent's failure to comply with any of the requirements of this Consent Order. Such remedies and sanctions may include a suit for statutory penalties up to the amount authorized by law, a federally-funded response action, and a suit for reimbursement of costs incurred by the United States.

#### **XVIII. REIMBURSEMENT OF OVERSIGHT AND RESPONSE COSTS**

104. In accordance with Section 104(a)(1) of CERCLA, as amended, 42 U.S.C. § 9604(a)(1), Respondents agree to reimburse the Hazardous Substance Superfund for all response and oversight costs incurred by EPA or its authorized representatives with respect to Respondent's performance of Work under the Consent Order after March 1, 1994.

105. At the end of each fiscal year, EPA will submit to Respondents an accounting of all response and oversight costs incurred by the United States with respect to this Consent Order. Oversight costs shall include all direct and indirect costs of EPA's oversight arrangement for the work to be performed, including, but not limited to, time and travel costs of EPA personnel and associated indirect costs, contractor costs, compliance monitoring, including the collection and analysis of split samples, inspection of activities, site visits, interpretation of Consent Order provisions, discussions regarding disputes that may arise as a result of this Consent Order, review and approval or disapproval of reports, the costs of redoing any of Respondent's tasks, and any assessed interest. EPA's certified Agency Financial Management System Summary data ("SPUR Reports") and any other necessary documents, shall serve as the basis for payment demands. Failure to submit an accounting in one fiscal year does not prevent EPA from submitting an accounting for that year in a subsequent fiscal year. Respondent shall, within forty-five (45) calendar days of receipt of each accounting, remit a certified or cashiers check for the amount of those costs made payable to the Hazardous Substance Superfund. In the event such payments are not made by Respondent, interest shall begin to accrue on the unpaid balance on the date of

Respondent's receipt of the accounting at the rate specified in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). Checks should specifically reference the identity of the Site and should be sent to:

U. S. Environmental Protection Agency  
Region IV  
Superfund Accounting  
P. O. Box 100142  
Atlanta, Georgia 30384  
ATTENTION: Collection Officer for Superfund  
Monarch Tile, Inc.

A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

106. Respondent agrees to limit any disputes concerning Future Response Costs to accounting errors and the inclusion of costs outside the scope of this Consent Order. Respondent shall identify any contested costs and the basis of its objection. All undisputed costs shall be remitted by Respondent in accordance with the schedule set out above. Disputed costs shall be paid by Respondent into an escrow account while the dispute is pending. Respondent bears the burden of establishing an EPA accounting error and the inclusion of costs outside the scope of this Consent Order.

107. EPA reserves the right to bring an action against the Respondent pursuant to Section 107 of CERCLA to enforce the response and oversight cost reimbursement requirements of this Consent Order and to collect stipulated penalties assessed pursuant to section XVIII of this Consent Order.

#### **XIX. RESERVATION OF RIGHTS**

108. Notwithstanding compliance with the terms of this Consent Order, the Respondent is not released from liability, if any, for any actions beyond the terms of this Consent Order taken by EPA regarding this Site. EPA reserves the right to take any enforcement action pursuant to CERCLA or any other available legal authority, including the right to seek injunctive relief, monetary penalties, and punitive damages for any violation of law or this Consent Order.

109. Except as otherwise provided herein, EPA and Respondent expressly reserve all rights and defenses that they may have, including EPA's right both to disapprove of Work performed by Respondent and to require that Respondent performs tasks in addition to those detailed in a work plan, as provided in this Consent Order. In the event that Respondent declines to perform any such additional or modified tasks, EPA will have the right to undertake any Work. In addition, EPA reserves the right to

undertake removal actions and/or remedial actions at any time. In either event, EPA reserves the right to seek reimbursement from Respondent thereafter for such costs which are incurred by the United States and Respondent reserves all rights to contest or defend against such claims or actions.

110. Following satisfaction of the requirements of this Consent Order, Respondent shall have resolved its liability to EPA for the performance of the Work that is the subject of this Consent Order. The Respondent is not released from liability, if any, for any actions taken beyond the terms of this Consent Order regarding removals, other operable units, remedial actions, remedial investigation/feasibility study or remedial design/remedial action, or activities arising pursuant to section 121(c) of CERCLA.

#### **XX. OTHER CLAIMS**

111. Nothing in this Consent Order constitutes a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

112. EPA reserves the right to bring an action against the Respondent pursuant to Section 107 of CERCLA for recovery of all response and oversight costs incurred by the United States related to this Consent Order and not reimbursed by Respondent, as well as any other past and future response costs incurred by the United States in connection with response activities conducted pursuant to CERCLA at this Site.

113. This Consent Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

114. Respondent shall bear its own costs and attorney fees. Nothing herein is intended to benefit any persons not signatories hereto, and EPA and Respondent expressly disclaim any intent to create third party beneficiary rights in or for any third party.

#### **XXI. COVENANT NOT TO SUE**

115. Except as otherwise specifically provided in this Order, upon issuance of the EPA notice referred to in Section XXII - Notice of Completion, EPA covenants not to sue Respondent for judicial imposition of damages or civil penalties or to take administrative action against Respondent for any failure to perform removal actions agreed to in this Order except as otherwise reserved herein.

116. These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondent of its obligations under this Order. These covenants not to sue extend only to the Respondent and does not extend to any other person.

#### **XXII. NOTICE OF COMPLETION**

117. When EPA determines, after EPA's review of the Final Report, that all removal actions have been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, including Section XIV (Record Preservation) and Paragraph 69 (Post-Removal Site Control), EPA will provide written notice of completion to Respondent. If EPA determines that any removal actions have not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Order.

#### **XXIII. SEVERABILITY**

118. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

#### **XXIV. OTHER APPLICABLE LAWS**

119. All actions required to be taken pursuant to this Consent Order will be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations unless an exemption from such requirements is specifically provided in this Consent Order, or made a part of this Consent Order by being incorporated herein at some later date.

#### **XXV. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT**

120. Respondent agrees to indemnify and save and hold harmless the United States, its agencies, departments, officials, agents, employees, contractors, or representatives, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent, its officers, employees, receivers, trustees, agents, or assigns, in carrying out the activities pursuant to this Consent Order. The United States Government or any agency or authorized representative thereof shall not be held

to be a party to any contract involving Respondent at or relating to the Site.

121. Nothing in this Consent Order constitutes or shall be construed or interpreted to constitute an admission of any kind by Respondent, including any admission of any liability under any federal, state or local law, ordinance or regulation, or any admission of any fact.

#### **XXVI. CONTRIBUTION PROTECTION**

122. The Respondent shall be entitled to contribution protection to the maximum extent provided for under Section 113(f) of CERCLA.

#### **XXVII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION**

123. This Consent Order shall be effective upon Respondent's receipt of written notice of the signature of this Consent Order from the Director of the Waste Management Division.

124. This Consent Order may be amended by mutual agreement of EPA and Respondent. Such amendments will be in writing and will have, as the Effective Date, that date on which such amendments are signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Consent Order.

125. Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any noncompliance with such EPA approved reports, plans, specifications, schedules, and attachments will be considered a failure to achieve the requirements of this Consent Order and will subject the Respondent to the provisions included in the "Force Majeure" and "Stipulated Penalties" sections (Sections XV and XVI) of this Consent Order.

126. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondent will be construed as relieving Respondent of its obligation to obtain such formal approval of EPA as may be required by this Consent Order.

#### **XXVIII. NOTICE TO THE STATE**

127. EPA has notified the State of Alabama regarding the requirements of this Consent Order.

128. Upon completion of the EE/CA, EPA will notify the State of Alabama before determining the appropriate removal action to be taken at the Site.

**XXIX. TERMINATION AND SATISFACTION**

129. This Consent Order shall terminate when the Respondent demonstrates in writing and certifies to the satisfaction of EPA that all activities required under this Consent Order, including any additional work, response and oversight costs, and any stipulated penalties demanded by EPA, have been performed and EPA has approved the certification by issuing a notice to respondent of approval of the certification of termination. This notice shall not, however, terminate Respondent's obligation to comply with Sections XIV and XX of this Consent Order.

130. The certification shall be signed by a responsible official representing each Respondent. Each representative shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." For purposes of this Consent Order, a responsible official is a corporate official who is in charge of a principal business function.

**XXX. SCHEDULE OF ATTACHMENTS**

131. All attachments to this Consent Order are incorporated into this Consent Order as if fully set forth herein. The following schedule of attachments is not intended to be comprehensive. Additional attachments may be made part of this Consent Order as provided in Section XXVII, paragraph 126.

- Attachment 1: Statement of Work for EE/CA and Removal Activities
- Attachment 2: EE/CA Work Plan (to be provided by Respondent, as approved by EPA, and attached hereto pursuant to Section IX of this Consent Order)
- Attachment 3: EE/CA Report (to be provided by Respondent, as approved by EPA, and attached hereto pursuant to Section IX of this Consent Order)
- Attachment 4: Removal Action Plan (to be provided by Respondent, approved by EPA, and attached hereto, pursuant to Section IX of this Consent Order)
- Attachment 5: Portion (1) of North Fill Area
- Attachment 6: Portion (2) of North Fill Area



IT IS SO AGREED:

BY:

Thomas S. White  
Thomas S. White  
President  
MONARCH TILE, INC.

10/6/94.  
Date

IT IS SO AGREED AND ORDERED:

BY:

Joseph R. Franzmathes  
Joseph R. Franzmathes  
Director  
Waste Management Division  
Region IV  
U.S. Environmental Protection Agency

DEC 1 1994  
Date

## ATTACHMENT 1

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SCOPE OF WORK FOR THE  
NON-TIME CRITICAL REMOVAL ACTION

INTRODUCTION

The purpose of this Scope of Work ("SOW") is to set forth the requirements of an Engineering Evaluation/Cost Analysis (EE/CA) Report to be prepared by Respondent, and to provide for EPA's selection of a Non-Time Critical Removal Action ("removal action") at the site operated by Monarch Tile, Inc., in Florence, Alabama ("Site"). The purpose of the EE/CA Report is to investigate the nature and extent of contamination at the Site, assess the current and potential risk to public health, welfare, and the environment, and to develop and evaluate potential Non-Time Critical Removal Action Alternatives.

As provided for in the Administrative Order on Consent to which this SOW is an attachment ("AOC"), Respondent shall conduct all EE/CA work activities and produce an EE/CA Report that is in accordance with this SOW, EPA's "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA" (OSWER Dir. #9360.0-32, August 1993) ("EE/CA Guidance"), The National Oil and Hazardous Substances Pollution Contingency Plan (55 Fed. Reg. 1) (March 8, 1990) and all amendments or modifications thereto, and any other guidance used by EPA in conducting an EE/CA (the primary guidance are listed in Appendix A to this Attachment), as well as any additional requirements in the AOC or this SOW. The EE/CA Guidance describes the report format and the required report content. Pertinent EE/CA Guidance section numbers are denoted in parenthesis throughout this Scope of Work. Respondent shall furnish all necessary personnel, materials, and services needed or incidental to performing the EE/CA work activities and producing the EE/CA Report, except as otherwise specified in the AOC.

At the completion of the EE/CA Report as approved by EPA, EPA shall be responsible for the selection of a removal action to be implemented for the Site. Respondent shall be responsible thereafter for implementation of the selected removal response action. EPA will provide public notice and comment regarding EPA's selection of the removal action as provided for in Section IX of the AOC to which this SOW is attached. The Non-time Critical Removal Action Alternative selected by EPA will meet the cleanup standards specified in Section 121 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act ("SARA"), 42 U.S.C. § 9601 et seq. That is, the selected removal action will be protective of human health and the environment, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable,

will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws or regulations, and will address the statutory preference for on-site treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The EE/CA Report, as adopted by EPA under Section IX of the AOC, will, with the remainder of the Administrative Record, form the basis for the selection of the removal action to be implemented for the Site and will provide the information necessary to support the development of the Action Memorandum.

As specified in 104(a)(1) of CERCLA, as amended by SARA, EPA must provide oversight of the Respondent's activities throughout the EE/CA work activities. Respondent shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the primary responsibility for conducting adequate EE/CA work activities to produce a satisfactory EE/CA Report that will enable EPA to select a remedy and support the selection decision shall lie with the Respondent. EPA and ADEM review, and EPA approval of deliverables, is a tool to assist this process and to satisfy, in part, EPA's and ADEM's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that Respondent shall submit for the EE/CA Report is attached (Appendix B). In addition, a general schedule of EE/CA activities is also attached (Appendix C).

#### TASK 1 - SCOPING

A Scoping meeting involving the Respondent, EPA and ADEM at the initial planning process of EE/CA work activities will determine the site-specific objectives of EE/CA work. Scoping shall be continued, repeated as necessary, and refined throughout the EE/CA process. EPA has developed Site Objectives and a Site Management Strategy, below, for EE/CA work activities at the Site. Consistent with the Site Management Strategy, the specific project scope shall be planned by the Respondent, EPA and ADEM. Respondent shall document the specific project scope in the EE/CA Work Plan. Because the work required to perform the EE/CA Report is not fully known at the onset, and is phased in accordance with a Site's complexity and the amount of available information, it may be necessary to modify the EE/CA Work Plan during the EE/CA work activities to satisfy the objectives of the study.

The Site Objectives for the Site have been determined preliminarily, based on available information, to be the following:

1. Review of existing information pertaining to the Site. This

- review includes EPA Site Inspection Reports, the EPA Hazardous Ranking System Scoring package, reports from local, State and Federal agencies, information provided by the company on past activities, information from local businesses such as local well drillers and waste haulers and generators, facility records, and information from facility owners and employees and nearby citizens.
2. Review of relevant guidance (see attached references) to understand the non-time critical removal process. This information shall be used in performing EE/CA work activities, and preparing all deliverables under this SOW, including the EE/CA Report.
  3. Identification of all Federal and State applicable or relevant and appropriate requirements (ARARs) for the contaminants identified in the HRS package, including but not limited to barium, cadmium, lead, and zinc.
  4. Determination of the nature and both lateral and vertical extent of contamination (waste types, concentrations and distributions) for all potentially affected media which may include air, ground water, soil, surface water, and sediment, etc. Particular concern should be given to the settling ponds (both filled and open), the sludge trench, the former Plant No. 1 discharge area, and the north drainage path and the south drainage path.
  5. Assembly of technologies into and screening of alternatives.
  6. Detailed analysis of Non-Time Critical Removal Action Alternatives in an EE/CA Report.
  7. Implementation of the selected Non-Time Critical Removal action.

The Site Management Strategy for the Site includes the following:

1. A complete investigation of the Facility, including any off-site contamination thereon which may have been caused by contaminants originating from the Site.
2. Evaluation of the Facility as a whole.
3. EPA and State of Alabama (ADEM) oversight of the Respondent's conduct of the work (i.e., the EE/CA) to ensure compliance with applicable laws, regulations and guidance and to ensure that the work proceeds in a timely fashion.
4. EPA review and approval of the Streamlined Risk Evaluation.
5. EPA management of the Removal Action Selection phase with

input from State Agencies, Natural Resource Trustees and the Public (including the Respondent).

6. EPA oversight of the Respondent's conduct of work (i.e., any response action) to ensure compliance with applicable laws, regulations and guidance, and to ensure that work proceeds in a timely manner.

When scoping the specific aspects of a project, Respondent must discuss with EPA all project planning decisions and special concerns associated with the Site. The following activities shall be performed by the Respondent.

a. Site Background (EE/CA Guidance 2.4)

Respondent shall gather and analyze the existing background information regarding the Site to assist in planning the scope of EE/CA work activities, as provided for in EE/CA Guidance 2.4.

Collect and Analyze Existing Data and Document the Need for Additional Data

Before planning EE/CA work activities, all existing Site data shall be thoroughly compiled and reviewed by the Respondent. Specifically, this compilation and review shall include currently available data relating to the varieties and quantities of hazardous substances at the Site and past disposal practices (what type of contaminants were placed where, when, and by whom). This compilation and review shall also include results from any previous sampling or other investigations that may have been conducted. Respondent shall refer to the EE/CA Guidance for a comprehensive list of data collection information sources. This compilation will be critical in developing the Work Plan.

b. Scoping Deliverables

As provided for in Section IX of the AOC, Respondent has submitted to EPA for EPA approval a work plan for a complete Engineering Evaluation and Cost Analysis ("EE/CA Work Plan") in accordance with the SOW, 40 C.F.R. § 300.415(b)(4)(i), EPA's "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA" (OSWER Dir. #9360.0-32, August 1993), and with EPA Region IV Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, U.S. EPA Region IV, Environmental Services Division, February 1, 1991, and subsequent amendments to such guidelines and procedures.

EE/CA Work Plan

An EE/CA Work Plan documenting the decisions and evaluations completed during the scoping process has been submitted to EPA and ADEM for review, and for EPA approval. The EE/CA Work Plan

was developed in conjunction with the EE/CA Sampling and Analysis Plan ("EE/CA SAP") (which included an EE/CA Field Sampling and Analysis Plan ("EE/CA FSAP") and Quality Assurance Project Plan ("EE/CA QAPP")), and an EE/CA Health and Safety Plan. The EE/CA Work Plan and EE/CA SAP must be reviewed and approved by EPA, and the Health and Safety Plan reviewed by EPA and ADEM prior to the initiation of field activities, although each plan may be delivered under separate cover. The EE/CA Work Plan included a comprehensive description of the previous work, the work to be performed, the media to be investigated (i.e., Air, Ground Water, Surface Water, Surface and Subsurface Soils, and Sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity and submission of each deliverable through the EE/CA Report has also been included. This schedule shall be consistent with Appendix C. Such schedule shall reflect submittal of the Engineering Evaluation/Cost Analysis Report within 250 calendar days of the date of EPA approval of the EE/CA Work Plan.

Specifically, the Work Plan shall present the following:

1. Statement of the problem and potential problems posed by the Site and the objectives of the EE/CA.
2. Background summary setting forth the following:
  - a) description of the Site including the geographic location, and, to the extent possible, a description of the physiography, hydrology, geology, demographics, and the ecological, cultural, and natural resource features of the Site;
  - b) synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site;
  - c) summary of the existing data in terms of physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the Site.
3. Description of the Site Management Strategy developed by EPA as discussed previously in this SOW and as may be modified with EPA's approval;
4. Preliminary identification of Removal Action Alternatives and data needs for evaluation of Removal Action Alternatives.
5. Process for identifying Federal and State ARARs

(chemical, location, and action-specific).

6. Statement recognizing EPA's required approval of the Streamlined Risk Evaluation.
7. Detailed description of the tasks to be performed, information needed for each task and for the Streamlined Risk Evaluation, information to be produced during and at the conclusion of each task, and a description of the work products that shall be submitted to EPA and ADEM, including the deliverables set forth in this Scope of Work.
8. Schedule for each of the required activities which is consistent with Appendix C.
9. Project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format, and backup data management), monthly reports to EPA and ADEM, and meetings and presentations to EPA and ADEM at the conclusion of each major phase of the EE/CA.

Respondent shall refer to Appendix B of the RI/FS Guidance, entitled "Elements of RI/FS Project Plans", for a comprehensive description of the contents of the EE/CA Work Plan.

Because of the unknown nature of the Site and iterative nature of the EE/CA Report requirements, additional data requirements may be identified throughout the EE/CA process. Respondent shall submit a technical memorandum documenting any need for additional data along with the proposed Data Quality Objectives ("DQOs") whenever such requirements are identified. In any event, the Respondent is responsible for fulfilling additional data and analysis needs identified by EPA and ADEM consistent with the general scope and objectives of this SOW and the AOC.

#### EE/CA Sampling and Analysis Plan (RI/FS guidance 2.3.2)

Respondent has submitted an EE/CA Sampling and Analysis Plan ("EE/CA SAP") providing that sample collection and analytical activities will be conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established.

The EE/CA FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The EE/CA QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control ("QA/QC") protocols



that shall be used to achieve the desired DQOs. The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan, (55 Fed. Reg. 1)(March 8, 1990). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (February 1, 1991). Field personnel shall be available for EPA QA/QC training and orientation, as required.

Respondent shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This demonstration must include use of methods and analytical protocols for the chemicals of concern (typically the Target Compound List ("TCL") and the Target Analyte List ("TAL")) in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must have and follow an EPA-approved QA program. Respondent shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis. EPA may require that the Respondent submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program ("CLP") and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory. If a laboratory not currently participating in the CLP is selected, methods consistent with CLP methods that would be used at this Site for the purposes proposed and QA/QC procedures approved by EPA shall be used. In addition, if the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval granted prior to the shipment of Site samples to that laboratory for analysis.

#### EE/CA Health and Safety Plan (RI/FS guidance 2.3.3)

An EE/CA Health and Safety Plan has been submitted for EPA in conformance with the Respondent's health and safety program, and in compliance with OSHA regulations and protocols. The EE/CA Health and Safety Plan includes the eleven elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that EPA does not "approve" the Respondent's Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements

are included, and that the plan provides for the protection of human health and the environment.

#### TASK 2 - COMMUNITY RELATIONS (EE/CA Guidance 1.6)

The development and implementation of community relations activities are the primary responsibility of EPA. Pursuant to Paragraph 59 of the AOC, Respondent shall submit a proposal for participation in EPA's development of a Site-Specific Community Relations Plan. The critical community relations planning steps performed by EPA include conducting community interviews and developing a community relations plan. Although implementation of the community relations plan is the responsibility of EPA, the Respondent will be requested to assist by providing information regarding the history of the Site and participating in public meetings. The extent of Respondent's involvement in EPA's community relations activities is left to the sole discretion of EPA. Respondent's community relations responsibilities, if any, shall be specified in EPA's community relations plan. All community relations activities conducted by Respondent shall be subject to oversight by EPA.

#### TASK 3 - SITE CHARACTERIZATION (EE/CA Guidance 2.4)

Site characterization shall be identified in the EE/CA Work Plan as Task 1. Within seven (7) calendar days of the approval of the EE/CA Work Plan by EPA, Respondent will commence work on Task 1 of the EE/CA Work Plan.

The overall objective of Site Characterization is to describe areas of the Site that may pose a threat to human health or the environment. This objective is accomplished by first determining physiography, geology, and hydrology of the Site. Surface and subsurface pathways of migration shall also be defined. Respondent shall identify the sources of contamination and define the nature, extent, and volume of the sources of contamination, including their physical and chemical constituents as well as their concentrations at incremental locations in the affected media. Respondent shall also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics. This investigation will provide for a comprehensive understanding of the nature and extent of contamination at the Site. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the EE/CA, the EE/CA Work Plan, SAP, and Health and Safety Plan shall be implemented. Respondent shall collect and analyze field data to provide the information required to accomplish the objectives of the study. Respondent shall notify EPA and ADEM at least two weeks in advance of the field work regarding the planned dates for field activities, which may include installation of monitoring wells, installation

and calibration of equipment, pump tests, field lay out of any sampling grid, excavation, sampling and analysis activities, and other field investigation activities. Respondent shall demonstrate that the laboratory and type of laboratory analyses that will be utilized during Site Characterization meets the specific QA/QC requirements and the DQOs as specified in the SAP. In view of the unknown conditions at the Site, activities are often iterative and, to satisfy the objectives of the EE/CA, it may be necessary for the Respondent to supplement the work specified in the initial Work Plan. In addition to the deliverables below, the Respondent shall provide a monthly progress report to EPA and ADEM and participate in meetings with EPA and ADEM at major points in the EE/CA at the request of EPA.

a. Field Investigation

The field investigation includes the gathering of data to define physical characteristics, sources of contamination, and the nature and extent of contamination at the Site. These activities shall be performed by the Respondent in accordance with the Work Plan and SAP. At a minimum, this investigation shall include the following activities:

Implementing and Documenting Field Support Activities

Respondent shall initiate field support activities following approval of the Work Plan and SAP. Field support activities may include obtaining access to the Site, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or contractors. Respondent shall notify ADEM and EPA at least two weeks prior to initiating field support activities so that EPA may adequately schedule oversight tasks. Respondent shall also notify ADEM and EPA in writing upon completion of field support activities.

Investigation and Defining Site Physical and Biological Characteristics

Respondent shall collect data on the physical and biological characteristics of the Site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the Work Plan. This information shall be ascertained through a combination of physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of the Site, the Respondent shall also obtain sufficient engineering data (such as pumping characteristics, soil particle size, permeability, etc.) for the projection of contaminant fate and transport and the development and screening of Non-time Critical Removal Action Alternatives.

### Defining Sources of Contamination

Respondent shall further define each source of contamination. For each location, the lateral and vertical extent of contamination shall be determined by sampling at incremental depths on a sampling grid or in another organized fashion approved by EPA. The physical characteristics and chemical constituents and their concentrations shall be determined for all known and discovered sources of contamination. Respondent shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QA/QC plan and DQOs. Sources of contamination shall be analyzed for the potential of contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating non-time critical removal actions, including information necessary to evaluate treatment technologies.

### Describing the Nature and Extent of Contamination

Respondent shall gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, the Respondent shall utilize the information on Site physical characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. Respondent shall then implement an iterative monitoring program and any study program identified in the Work Plan or SAP such that, by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the Site can be determined. In addition, the Respondent shall gather data for calculations of contaminant fate and transport. This process is continued until the lateral and vertical extent of contamination has been determined to the contaminant concentrations consistent with the established DQOs set forth in the QAPP. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by the Site. Respondent shall use this information to help to determine aspects of the appropriate Non-time Critical Removal Action Alternatives to be evaluated and included in the EE/CA Report.

#### b. Data Analyses

##### Evaluate Site Characteristics

Respondent shall analyze and evaluate the data to describe: (1) physical and biological characteristics of the Site; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. The information on physical and biological characteristics, source characteristics, and nature and extent of contamination shall be

used in the analysis of contaminant fate and transport. The evaluation shall include the actual and potential magnitude of releases from the sources and lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use. Respondent shall then collect any data identified by EPA as necessary to fill data gaps that EPA determines are present during review of the Streamlined Risk Evaluation (see "Guidance for Data Useability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, October 1990, OSWER Directive No. 9285.7-05). Also, this Site Characteristic Evaluation shall provide any information relevant to characteristics of the Site necessary for determination of the need for Non-time Critical Removal Action in the Streamlined Risk Evaluation, the development and evaluation of Non-time Critical Removal Action Alternatives, and the refinement and identification of ARARs. Analyses of data collected for Site Characterization shall meet the DQOs developed in the QAPP.

c. Data Management Procedures

Respondent shall consistently document the quality and validity of field and laboratory data. At a minimum, this documentation shall include the following activities:

Documenting Field Activities

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by the Respondent in well maintained field logs and laboratory reports. The methods of documentation must be specified in the Work Plan and/or the SAP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. Supporting documentation described as the "CLP Data Package" must be provided with the sample analysis for all samples split or duplicated with EPA.

Maintaining Sample Management and Tracking

Respondent shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the Streamlined Risk Evaluation and Non-time Critical Removal Action Alternatives. Analytical

results developed under the Work Plan shall not be included in any characterization reports for the Site unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondent shall establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

d. Site Characterization Deliverables

Respondent shall prepare the Site Characterization Summary pursuant to the schedule set forth in the EE/CA Work Plan and as approved by EPA.

Site Characterization Summary

After completing field sampling and analysis, the Respondent shall prepare a concise Site Characterization Summary. This summary shall review the investigative field activities that have taken place and describe and display data for the Site documenting the location and characteristics of surface and subsurface features and contamination at the Site including the affected medium, location, types, physical state, and quantity and concentrations of contaminants. In addition, the location, dimensions, physical condition, and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media shall be documented.

Streamlined Risk Evaluation

After completion of the field sampling and analysis, the respondent shall prepare a Streamlined Risk Evaluation in accordance with EPA guidance as provided in Appendix A: #2, and #12 through #18. This evaluation shall determine the current and potential risks to human health, welfare and the environment, associated with the contamination at the facility and the facility data obtained during the site characterization.

**TASK 4 - IDENTIFICATION AND ANALYSIS OF NON-TIME CRITICAL  
REMOVAL ACTION ALTERNATIVES (EE/CA Guidance, 2.6)**

The identification and analysis of Non-time Critical Removal Action Alternatives are performed to select an appropriate range of waste management options to be evaluated, only the most qualified alternatives should be included in the EE/CA Report. The range of options shall include several different removal alternatives.

a. Identification of Non-time Critical Removal Action Alternatives

Respondent shall develop and evaluate, concurrent with the Site Characterization task, a range of appropriate waste management options that, at a minimum, ensure protection of human health and the environment and comply with all ARARs.

Refine and Document Non-time Critical Removal Action Objectives (EE/CA Guidance 2.5)

Respondent shall review and, if necessary, propose refinement to the Site Objectives and preliminary Non-time Critical Removal Action objectives that were established during the Scoping phase (Task 1). Any revised Site Objectives or revised Non-time Critical Removal Action objectives shall be documented in the EE/CA Report. These objectives shall specify the contaminants and media of interest, exposure pathways and receptors, and an acceptable contaminant level or range of levels (at particular locations for each exposure route).

Develop General Response Actions

Respondent shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the Non-time Critical Removal Action objectives.

Identify Areas and Volumes of Media

Respondent shall identify areas and volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the Non-time Critical Removal Action objectives. The chemical and physical characterization of the Site and the information provided by Streamlined Risk Evaluation and remediation goals shall also be taken into account.

Assemble and Document Alternatives

Respondent shall assemble selected representative technologies into alternatives for each affected medium or operable unit. A summary of the assembled alternatives and their related action-specific ARARs shall be prepared by the Respondent for inclusion in a technical memorandum. A detailed analysis shall be included in the EE/CA Report based upon the evaluation criteria set forth in Section 2.6 of the EE/CA Guidance.

b. Alternatives Identification Deliverables

Respondent shall prepare a technical memorandum summarizing the work performed and the results of each task above, including an

alternatives array summary. This deliverable shall document the methods, rationale, and results of the alternatives development process. This deliverable may, at EPA's discretion, include a Treatability Study Report for proposed On-Site treatment technologies, as appropriate.

#### TASK 5 - COMPARATIVE ANALYSIS OF NON-TIME CRITICAL REMOVAL ACTION ALTERNATIVES

The comparative analysis shall be conducted by the Respondent to provide EPA with the information needed to allow for the selection of a remedy for the Site.

##### a. Comparative Analysis of Alternatives

Respondent shall conduct a comparative analysis of the Non-Time Critical Removal Action alternatives, using criteria consistent with the National Contingency Plan ("NCP") as a basis for comparison.

##### Compare Alternatives Against Each Other and Document the Comparison of Alternatives

Respondent shall perform a comparative analysis among the Non-time Critical Removal Action Alternatives. That is, each alternative shall be compared against the others using the evaluation criteria as a basis of comparison. No alternative shall be identified by Respondent as the preferred alternative. Identification and selection of the preferred alternative is conducted by EPA.

##### b. Comparative Analysis Deliverables

Respondent shall prepare an EE/CA Report for EPA and ADEM review and comment. Where applicable, Respondent shall prepare subsequent EE/CA Reports which satisfactorily address EPA's comments. As provided in Paragraph 60 of the Consent Order, the EE/CA Report shall be submitted pursuant to the schedule in the EE/CA Work Plan and subject to EPA approval. This report, as ultimately adopted or amended by EPA, will provide a basis for remedy selection by EPA and documents the development and analysis of Non-time Critical Removal Action Alternatives. Respondent shall refer to the EE/CA Guidance for an outline of the report format and the required report content.

#### TASK 6 - IMPLEMENTATION OF THE SELECTED NON-TIME CRITICAL REMOVAL ACTION

The implementation of the Non-Time Critical Removal Action shall be conducted by the Respondent at the direction of EPA, only after public notice and comment, the issuance of a Decision



Memorandum by EPA, and EPA's issuance of a Notice to Proceed with the removal action.

a. Submittal of a Removal Action Plan

Within thirty (30) calendar days of Respondent's receipt of the Notice to Proceed, Respondent shall submit a Removal Action Plan ("RAP") to EPA and ADEM for EPA approval under this Consent Order. Where applicable, Respondent shall prepare subsequent RAPs which satisfactorily address EPA's comments.

The RAP shall be a guiding document governed by the AOC. The plan shall contain all technical criteria and specifications for conducting the Non-Time Critical Removal Action selected by EPA. This action may include, but not be limited to, expansion of the waste water discharge lines, closing of the open sedimentation ponds, closing of the sludge trench, solidification/stabilization of all contamination, expansion of the existing on-site water treatment plant, removal of contamination from the north and south drainage areas, any combination of these activities, and any other actions EPA deems appropriate including final site response actions and post-removal site control.

The RAP shall include detailed information on the methods to be used in conducting the Non-Time Critical Removal Action, and shall contain a minimum of the following:

(1) The RAP shall contain all information related to the initiation, performance, completion, and post-removal site control of the non-time critical removal action.

(2) The RAP shall contain sufficient detail to describe all field operations associated with the removal, treatment, and disposal of contaminated material and, to the extent necessary, to implement the removal measures selected by EPA and set forth in the EPA's Action Memorandum, as well as upgrade the existing facilities to prevent further contamination.

Removal Sampling and Analysis/QA & QC Plan

This plan shall provide information on the methods to be used in collecting soil, groundwater, sediment and surface water samples, and in performing subsequent analytical testing of these samples. Also, this Plan will provide information to demonstrate how the Respondent will assure the validity of data generated through sample collection and analysis. Verification sampling will be addressed in this section.

Respondent will use the quality assurance, quality control, and chain of custody procedures in accordance with EPA

Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (U.S. EPA Region IV, Environmental Services Division, February 1, 1991), throughout all sample collection and analysis activities. Respondent will consult with EPA in planning for all sampling and analysis. Respondent shall provide a quality control report to EPA certifying that all activities have been performed as approved.

#### Removal Site Health and Safety Plan

This document shall detail all appropriate field health and safety protocols to be followed in conducting the removal action, and shall be developed in accordance with all applicable OSHA and EPA regulations and guidance currently in effect regarding field health and safety of hazardous waste site personnel.

#### Project Schedule

This schedule shall reflect proposed specific calendar dates of initiation, duration, and completion for all major work elements outlined in the Removal Work Plan, and shall delineate work elements to be conducted in the removal action.

Once the Project Schedule has been approved by EPA, it will be incorporated by reference as an attachment to this Consent Order, thereby establishing deadlines for the completion of work to be performed pursuant to this Consent Order.

#### b. Implementation of the Selected Response Action

Within sixty (60) calendar days of EPA's approval of the RAP, Respondent shall commence implementation of all response actions specified in the RAP under the oversight of EPA and ADEM. Respondent shall notify EPA upon completion of the removal response actions.

#### c. Final Report

Within thirty (30) calendar days of EPA's final inspection of the work performed under this AOC and SOW, Respondent shall submit to EPA a Final Report on all activities performed pursuant to the AOC and this SOW. The report shall include at a minimum the following information: site history and narrative summary, summary of activities, analytical summary for source removal, analytical report from laboratory, supporting QA/QC information, supporting photo documentation, waste treatment and disposal facility approvals, and professional engineering seals for all actions.

d. Post-Removal Site Control

Within sixty (60) calendar days of EPA's approval of the RAP, Respondent shall submit a Post-Removal Site Control Plan for approval by EPA, documenting the basis for Post-removal site control activities. Post-removal site control activities shall be implemented by the Respondent upon completion of removal actions.

e. Implementation Deliverables

Respondent shall prepare a RAP within thirty (30) calendar days of Respondent's receipt of the Notice to Proceed, for EPA and ADEM review and comment. The RAP, as ultimately adopted or amended by EPA, provides a basis for implementation of the Non-time Critical Removal Action. Respondent shall refer to the RI/FS Work Plan Guidance for an outline of the report format and the required report content. Respondent shall prepare a Final RAP which satisfactorily addresses EPA's comments.

Respondent shall prepare a Final Report for EPA and ADEM review and comment. This report, as ultimately adopted or amended by EPA, provides documentation of removal response actions of the Non-time Critical Removal Action. Respondent shall prepare a Final Report which satisfactorily addresses EPA's comments.

Respondent shall prepare a Post-Removal Implementation Plan for EPA and ADEM review and comment. This report, as ultimately adopted or amended by EPA, provides the basis for post-removal site control of the Non-time Critical Removal Action. Respondent shall prepare a Post-Removal Site Control Report which satisfactorily addresses EPA's comments.

## Appendix A: REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the EE/CA process:

1. The National Oil and Hazardous Substances Pollution Contingency Plan, March 8, 1990.
2. "Guidance for Conducting Non-Time Critical Removal Actions under CERCLA, Final" U.S. EPA, Office of Emergency and Remedial Response, August 1993, OSWER Directive No. 9360.0-32.
3. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final" U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.
4. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
5. "EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R.
6. "Data Quality Objectives for Remedial Response Activities," U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
7. "Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.
8. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.
9. "Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, December 1986.
10. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

11. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.
12. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part A," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002A, December 1989, OSWER Directive No. 9285.7-01a.
13. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part B," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002B, OSWER Directive No. 9285.7-01b.
14. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part C," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002C, OSWER Directive No. 9285.7-01c.
15. "Interim Final Risk Assessment Guidance for Superfund - Volume II - Environmental Evaluation Manual," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/001, March 1989, OSWER Directive No. 9285.7-01.
16. "Superfund Exposure Assessment Manual," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-88/001, April 1988, OSWER Directive No. 9285.5-1.
17. "Guidance for Data Useability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/G-90/008, October 1990, OSWER Directive No. 9285.7-05.
18. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30.
19. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.
20. OSHA Regulations in 29 CFR 1910.120 (Federal Register 45654, December 19, 1986).
21. "Community Relations in Superfund: A Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0-3B.

22. "Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual", U.S. EPA Region IV, Environmental Services Division, February 1, 1991.
23. "USEPA Contract Laboratory Program Statement of Work for Organics Analysis", U.S. EPA, Office of Emergency and Remedial Response, February 1988.
24. "USEPA Contract Laboratory Program Statement of Work for Inorganics Analysis", U.S. EPA, Office of Emergency and Remedial Response, July 1988.

## Appendix B: SUMMARY OF MAJOR DELIVERABLES

Following is a list of deliverables to assist in planning the work required by this Consent Order. This list shall in no way be construed as constituting EPA's statement of approval of any of the deliverables set forth below.

TASK	DELIVERABLE	EPA RESPONSE
TASK 1	SCOPING	
	- EE/CA Work Plan (13)	Review and Approve
	- EE/CA Field Sampling and Analysis Plan (13)	Review and Approve
	- EE/CA Quality Assurance Project Plan (5)	Review and Approve
	- EE/CA Health and Safety Plan (5)	Review and Comment
TASK 3	SITE CHARACTERIZATION	
	- Preliminary Site Characterization Summary (13)	Review and Comment
	- Streamlined Risk Evaluation (13)	Review and Approve
TASK 4	DEVELOPMENT AND SCREENING OF NON-TIME CRITICAL REMOVAL ACTION ALTERNATIVES	
	- Technical Memorandum Documenting Revised Non-time Critical Removal Action Objectives (if necessary) (5)	Review and Approve
	- Removal Action Alternative Array (5)	Review and Comment
TASK 5	COMPARATIVE ANALYSIS OF NON-TIME CRITICAL REMOVAL ACTION ALTERNATIVES	
	- Engineering Evaluation/ Cost Analysis (EE/CA) Report (13)	Review and Approve
TASK 6	IMPLEMENTATION OF THE SELECTED NON-TIME CRITICAL REMOVAL ACTION	

- |   |                                     |                    |
|---|-------------------------------------|--------------------|
| - | Removal Action Plan (13)            | Review and Approve |
| - | Post-Removal Site Control Plan (13) | Review and Approve |
| - | Final Report (13)                   | Review and Approve |

Note: The number in parenthesis indicates the number of copies to be submitted by Respondent. One copy shall be unbound, the remainder shall be bound, and all copies should be double-sided. A copy of all draft and final documents must be submitted on 3 1/2" diskette in WordPerfect 5.1. Three copies of all deliverables should be sent directly to the State of Alabama at the address specified in the Consent Order. Also, see the Consent Order for additional reporting requirements and further instructions on submittal and dispositions of deliverables.



## Appendix C: SCHEDULE OF MAJOR ACTIVITIES

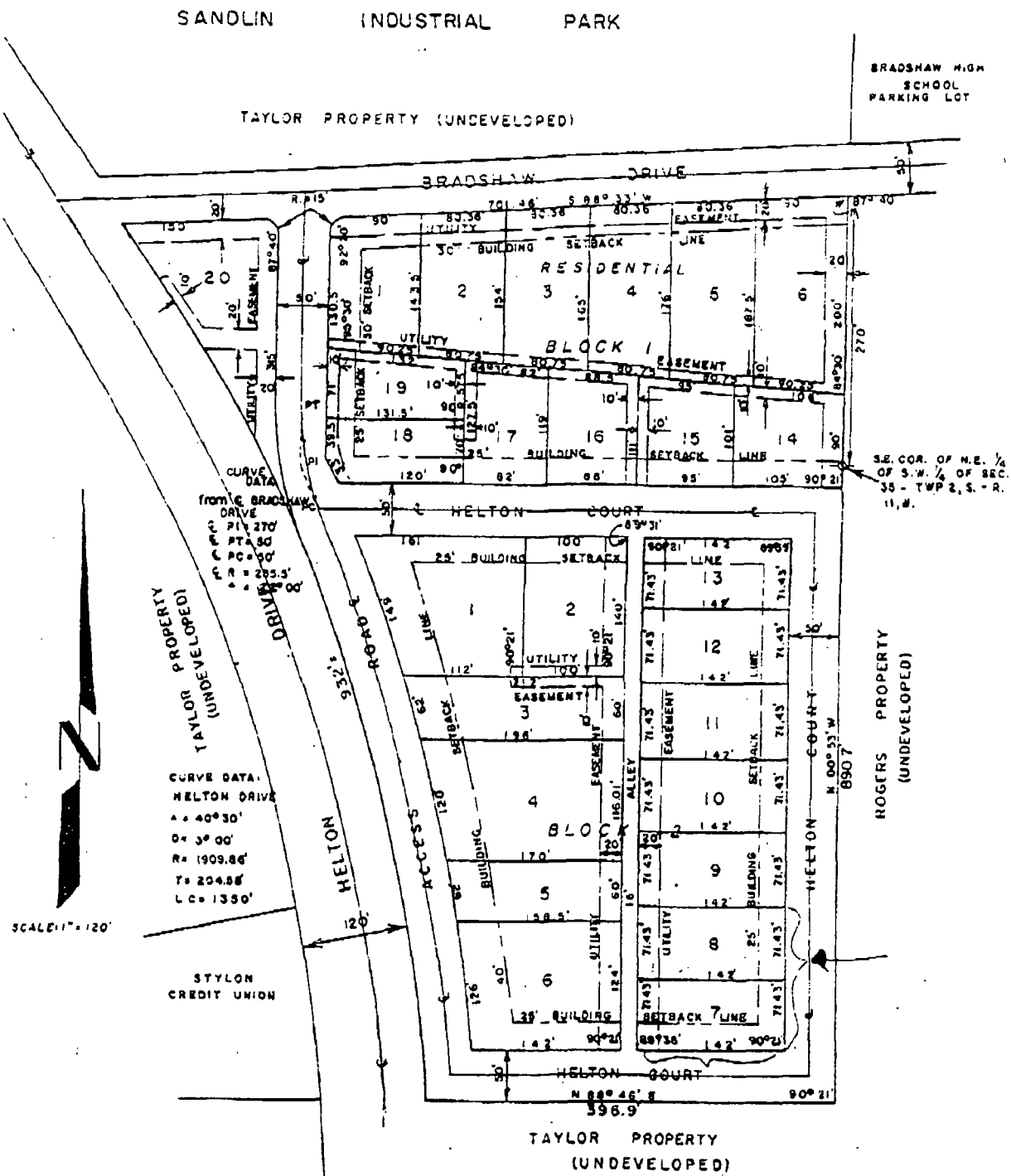
ACTIVITY	SCHEDULE DATE (DAYS)
Effective Date of AOC	X
Supervising Contractor Selected	X+10
Respondent's Project Coordinator Selected	X+10
Draft EE/CA Workplan and Associated Documents Submitted	X+30
Final EE/CA Workplan and Associated Documents Approval	Y
Initiate Fieldwork	Y+7
Fieldwork Complete	
Site Characterization Summary	
Streamlined Risk Evaluation Submitted	
EE/CA Report	Y+250
Selected Removal Action	Z
Removal Action Plan (RAP)	Z+30
Post-Removal Site Control Plan	Z+90
Final Completion Notification	10 days after completion of final inspection
Final Report	30 days after completion of final inspection
Post-Removal Site Control Actions	Commence upon completion of response action

Note: Other deliverables listed in Appendix B shall also be incorporated into the schedule to be submitted as part of the EE/CA Work Plan and the RAP.

**ATTACHMENT 5**

**MONARCH TILE, INC. ADMINISTRATIVE ORDER ON CONSENT FOR  
NON-TIME CRITICAL REMOVAL ACTION**

**Portion (1) of North Fill Area**



Plat showing at reduced scale, SANDLIN INDUSTRIAL PARK, according to the plat thereof recorded in the Office of the Judge of Probate of Lauderdale County, Alabama, in Plat Book 4, Page 149.

**ATTACHMENT 6**

**MONARCH TILE, INC. ADMINISTRATIVE ORDER ON CONSENT FOR  
NON-TIME CRITICAL REMOVAL ACTION**

**Portion (2) of North Fill Area**